1. (currently amended): A process for the flame-retardant treatment of a fiber product which contains from 20 to 100% by weight of cellulose fibers, based on the weight of the anhydrous fiber product, the fiber product or preferably a precursor thereof being treated in succession or simultaneously with a component A and a component B, component A being a branched polyethylenimine which contains primary, secondary and tertiary amino groups and which has a weight average molecular weight in the range from 5000 to 1 500 000, preferably from 10 000 to 1 000 000, and in which the numerical ratio of secondary amino groups to primary amino groups is in the range from 1.00 : 1 to 2.50 : 1 and the numerical ratio of secondary amino groups to tertiary amino groups is in the range from 1.20 : 1 to 2.00 : 1,

or component A being a mixture of such polyethylenimines, component B being a phosphonic acid of the formula (I), (II) or of the formula (III)

$$\begin{array}{c}
R^{1} \\
R-C-R^{3} \\
R^{2}
\end{array}$$
(I)

$$H_{y} N - \left(\begin{array}{c} O \\ | \\ CH_{2} - P - OH \\ OH \end{array} \right)_{3-y} \tag{II}$$

$$\begin{pmatrix}
O & R^4 \\
| | & | & O \\
| HO-P-CH_2-N-CH_2-CH_2-P \\
OH & OH
\end{pmatrix}$$
(III)

in which, in the formulae (I), (II) or (III), in up to 50% of the OH groups bonded to phosphorus the hydrogen atom may be substituted by an alkali metal or an ammonium group, but preferably 100% of these OH-groups being present in unneutralized form,

or component B being a mixture of compounds which are selected from compounds of the formulae (I), (II) or (III),

in which

y may assume the values 0, 1 or 2- and preferably has the value 0, R¹ is H or OH.

R is a linear or branched alkyl radical which contains 1 to 7 carbon atoms when R¹ is OH and 3 to 7

carbon atoms when R1 is H,

R² being

R³ being H or R², preferably R², and

all radicals R4, independently of one another, being H or

or being a radical of the formula (IV)

it-being preferable if from 50 to 100% of all radicals R4 present are

t being 0 or a number from 1 to 10.

- 2. (currently amended): The process as claimed in claim 1, wherein characterized in that component B is a mixture of phosphonic acids of the formula (I) and of the formula (II), both of which are present in completely unneutralized form.
- 3. (currently amended): The process as claimed in claim 1-or 2, wherein characterized in that component A is a polyethylenimine which is formed by polymerization of ethylenimine and which has the following structure (V) (formula (V))

$$\begin{array}{c} H_{2}N + CH_{2} - CH_{2} - N + \frac{1}{2} - CH_{2} - CH_{2} - NH + \frac{1}{2} - CH_{2} - NH_{2} \\ CH_{2} - CH_{2} - NH_{2} \end{array} \tag{V}$$

the polymerization optionally being acid-catalyzed,

it being possible for the individual units which contain tertiary amino groups and the individual units which contain secondary amino groups to be arbitrarily distributed over the polymer chain, b being greater than a and a and b having values such that the conditions, mentioned in claim 1, for the molecular weight and for the numerical ratios of the amino groups to one another are fulfilled or component A being a mixture of such polyethylenimines.

- 4. (currently amended): The process as claimed in one or more of claims 1 to 3 claim 1, wherein characterized in that the weight ratio of the amount of component A applied to the fiber product or to the precursor thereof to the amount of component B applied is in the range from 1: 1.3 to 1: 4.0.
- 5. (currently amended): The process as claimed in one or more of claims 1 to 4 claim 1, wherein characterized in that component A and/or component B are applied in the form of a mixture with water to the fiber product or to a precursor thereof.
- 6. (currently amended): The process as claimed in one or more of claims 1 to 5 claim 1, wherein characterized in that the precursor of the fiber product is present as an aqueous suspension of fibers.
- 7. (currently amended): The process as claimed in one or more of claims 1 to 6 claim 1, wherein characterized in that neither component A nor component B contains metals or metal compounds.
- 8. (currently amended): The process as claimed in one or more of claims 1 to 7 claim 1, wherein, characterized in that, in addition to the components A and B, polymaleic acid or partly neutralized polymaleic acid and/or a partial ester of orthophosphoric acid is also applied to the fiber product or the precursor thereof.
- 9. (currently amended): The process as claimed in one or more of claims 1 to 8 claim 1, wherein characterized in that a precursor of the fiber product is treated simultaneously or in succession with a component A and a component B, the component A preferably being applied earlier than the component B, and that this precursor is then further processed under the action of heat and pressure

to give a fiberboard or pressboard, this fiberboard or pressboard is then comminuted and is washed with water which contains one or more inorganic salts, then treated again with a component B and further processed under the action of heat and pressure to give a fiberboard and pressboard.

- 10. (new): The process as claimed in claim 1, wherein component B is a phosphonic acid in which 100% of the OH groups bonded to phosphorus are present in unneutralized form.
- 11. (new): The process as claimed in claim 1, wherein y has the value 0.
- 12. (new): The process as claimed in claim 1, wherein \mathbb{R}^3 is \mathbb{R}^2 .
- 13. (new): The process as claimed in claim 1, wherein 50 to 100% of all radicals R⁴ present are

14. (new): The process as claimed in claim 9, wherein component A is applied earlier than the component B.